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Appeal Brief for Entry in Patent Application File	
Examiner:	Daniel J. CHUNG
Technology Center:	2672
Serial Number:	09/828,457
Agent's Ref. No..:	10442-17US IC

November 24, 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	David BORDELEAU et al.
Serial No.:	09/828,457
Filing date:	04/09/2001
Title:	Method And Apparatus For Video Particle Explosion Effect
Examiner:	Daniel J. CHUNG Tel.: (703) 306-3419
SPE:	Michael RAZAVI Tel.: (703) 305-4713
Group Art Unit:	2672
Agent of Record:	Isabelle CHABOT Tel.: (418) 640-5174

Mail Stop Appeal brief - Patents
COMMISSIONER FOR PATENTS,
P.O. Box 1450, Alexandria, VA 22313-1450 U.S.A.

The Notice of Appeal in the above-captioned U.S. patent application was filed on September 28, 2004.

APPEAL BRIEF FEE

The appropriate fee for filing a brief in support of an appeal is $340.00 under 37 CFR 41.20(b)(2). The Commissioner is hereby authorized to charge the fee of $340.00 to Deposit Account Number 19-5113. The Commissioner is further hereby authorized to charge any fees which may be required, or credit any overpayment to the Deposit Account # 19-5113.

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APPEAL BRIEF

This is an Appeal under 37 CFR 1.192 from the Final Rejection of the Primary Examiner dated July 14, 2004. Each of the topics required by Rule 1.192 is presented herewith and is labeled appropriately.

I. REAL PARTY IN INTEREST

The real party in interest in this Appeal is Matrox Electronic Systems Ltd., the assignee of record, recorded at reel 011998, frame 0435, whose post office address is 1055 St-Regis Street, Dorval, Quebec H9P 2T4, Canada.

II. RELATED APPEALS AND INTERFERENCES

The Appellants know of no related appeals or interferences that will directly affect, will be directly affected by, or will have a bearing on the Board's decision in this Appeal.

III. STATUS OF CLAIMS

Claims 1-12 are pending. Claims 1-12 have been finally rejected. No claim has been allowed. The final rejection of claims 1-12 is appealed. Claims 1-12 as currently pending are reproduced in Appendix A.

Claims 1-12 are finally rejected under 35 U.S.C §102(e) as being anticipated by U.S. patent no. 6,069,668 to Woodham, Jr. et al.

IV. STATUS OF AMENDMENTS

No Amendments After Final Rejection have been filed in this case.

V. SUMMARY OF THE INVENTION

The invention concerns a transition effect for video file editing and playback. A transition effect is the video effect used to progress from one clip to another in a timeline of playback of the clips. One example of a very simple transition is a dissolve, which means that one clip dissolves or fades into the next.

The present invention is for a special type of transition effect, the particle explosion effect transition. It is an effect in which a clip breaks apart or explodes in a number of pieces, revealing another clip. It can be thought of as a glass surface shattering in a plurality of pieces to reveal what was hidden behind the glass surface. This effect allows to explode, shatter, blast, and break apart a video clip in real time with interesting cut-out shapes. Each particle piece is controlled by real world attributes such as gravity and dispersion.

The particles or pieces can have any shape the effect designer wishes. For example, as shown in Fig. 2D, the particles can have a random shape. Other shapes can also be used such as triangular pieces or Jigsaw Puzzle pieces (see Appendix B), which are first interconnected or placed side-by-side but which explode in a direction of choice of the effect designer.

A shape of all particles or pieces is defined in a particle pattern and explosion parameters (such as particle shape, explosion order, spin and softness) are preferably stored in a graphics image data file (see Fig. 2). Because the particle pattern is stored in a graphics image data file, the shape of the particles can be drawn by hand by an effect designer in any paint application and stored for use by the effect. No numerical tables need to be filled in by the designer. He simply draws the shapes of the particles and stores the file.

Extraction of the shape of each particle from the graphics image data file is made (see Fig. 3). The extracted shape of each particle is used to create a sequence of object definition data sets. There is an objection definition data set for each moment of the effect output. The sequence contains all sets needed to have a progression of the effect over time. The object definition data sets can then be associated with a particular field of the video source file by the graphics engine to render the particle exploded video output.

Claim 1 is for a method for generating a sequence of object definition data sets for a video particle explosion effect comprising: providing a graphics image data file of a particle pattern defining a shape of a plurality of particles; generating a sequence of object definition data sets using the graphics image data file; wherein the object definition data sets can be used to render a particle explosion effect on a video file.

Preferably, as claimed in claims 2 and 3, the graphics image data file has a plurality of channels. As shown in FIG. 2A to FIG. 2D, each channel can comprise different graphical information for the particle pattern which are therefore graphical representations of parameters for the explosion. This graphical information can also include, as claimed in claim 4, explosion sequence information, spin parameter information and softness of edges information.

Claim 11 is for a method for rendering a video particle explosion effect on a video source data file. It comprises the same steps as claim 1 with the additional steps of providing a video source data file and rendering the video particle explosion effect using the object definition data sets and the video source data file. As is shown at numeral 81 of FIG. 5, the video file itself is exploded into particles, whose shape is defined in the graphics image data file, once the effect is rendered.

Other claims are for different preferred aspects of the invention.

VI. ISSUES

In Applicant' view, the issues in this Appeal, as set out in the Final Action mailed July 14, 2004 are as follows:

1. Whether Woodham, Jr. et al. (US Patent No. 6,069,668) teach a "graphics image data file of a particle pattern" as defined in Applicant's claims; and

2. Whether Woodham, Jr. et al. (US Patent No. 6,069,668) teach "generating a sequence of object definition data sets using said graphics image data file" as defined in Applicant's claims.

VII. GROUPING OF CLAIMS

Claims 1 and 11 are the only two independent claims. The claims under Appeal are directed to the invention of claim 1 with the dependent claims 2-10 specifying more specific limitations. Claim 11 has a different preamble and additional limitations to those of claim 1 but contains the same limitations as claim 1. Dependent claim 12 specifies an additional limitation to claim 11.

Claims 2 to 12 are argued separately because they are worthwhile to Applicant and are separately patentable. Applicant believes the rejection of claim 1 to be unsubstantiated, thereby rendering the rejection of claim 11 and their respective dependent claims unsubstantiated but wishes to provide separate arguments nonetheless.

Claims 1 to 12 do not stand or fall together. Arguments as to why they are separately patentable are provided below.

VIII. ARGUMENT

1. Whether Woodham, Jr. et al. (US Patent No. 6,069,668) teach a "graphics image data file of a particle pattern" as defined in Applicant's claims.

In the Office Action of July 14, 2004, the Examiner asserted that the limitation of the "graphics image data file of a particle pattern" is shown in the teachings of Woodham, Jr. et al. as follows :

"providing images (i.e. 'panel A, B' in Fig 8, Fig 9; graphics image data)".

Woodham, Jr. et al. (US Patent No. 6,069,668, hereinafter referred to as "Woodham") discloses a digital video effects system for producing live-action video effects in real time. It includes an address generator having a pair of 2-D tables for providing x-coordinate and y-coordinate offset values. A third 2-D table contains warp activation factors (activators) which are scaled by a clip and gain processing technique to produce scaled activators. The scaled activators are used to scale the x- and y-offset values which are then combined with the original raster-order addresses to produce frame buffer readout addresses. An output video signal is produced by an inverse mapping of the input frame buffer to the output. The 2-D tables provide control of the image on a pixel-by-pixel basis. The degree of scaling by the clip and gain unit varies with time so that the resulting readout addresses also vary with time. A video effect, therefore, is produced simply by adjusting the scaling of the clip and gain unit. Moreover, a variety of effects can be achieved simply by changing the various 2-D tables.

Woodham fails to teach the graphics image data file of a particle pattern. Applicants submit that what the Examiner has used from Woodham to reject the phrase "providing a graphics image data file" of Applicants' claim 1 is not a teaching of a graphics image data file. Indeed, as stated in col. 4, lines 56-58, Woodham loads "different warp tables" to define "particles of arbitrary shape" and "the order in which the particles begin to

move". Woodham therefore uses tables of numerical parameters to create the particles. This technique clearly does not use a graphics image data file which defines at least the shape of the particles of a video file to be exploded.

The following is an excerpt from Woodham at Col. 3, lines 54-63 :

> *The offset and warp tables are 2-D tables addressed (indexed) by row and column. The offset tables consist of a table of x-offset values and a table of y-offset values, which together specify offset or displacement vectors in rectangular coordinate notation. Alternatively, the offset vectors may consist of tables containing angle and magnitude values, i.e. polar coordinates. The **2-D arrangement of the offset table entries** coincides with pixel positions, allowing each pixel position to be individually controlled.*

The following is an excerpt from Woodham at col. 6, lines 36-48

> *Returning to FIG. 1, x-offset and y-offset tables 30, 40 produce x- and y-offset values respectively, that feed into the offset scalers 81, 83. **The x- and y-offset values define what is called an offset vector, which specifies the amount and direction of displacement (or warping) of a pixel from its original location.** In an alternate embodiment, the tables 30, 40 may consist of polar coordinates rather than rectangular coordinates, without departing from the intended function of the tables since polar coordinates also suffice to describe the desired displacement (or warping). The tables would contain angle and magnitude values, instead of X and Y coordinates.*

The following is an excerpt from Woodham at col. 11, line 33 to col. 12, line 24 :

> *FIG. 7 is a test image... FIGS. 8A-8C and 9 are time sequences of the output image showing the transformations made to the test image as the effect is run.*
>
> *The time sequence of FIG. 8C illustrates an example of a burst effect. The x- and y-offset tables 30, 40 (FIG. 1)* ***used for*** *this sequence* ***are represented by*** *the gray scale images shown in FIGS. 8A and 8B, respectively. The offset values in these tables are* ***visually represented*** *by corresponding gray values comprising the images.*
>
> *Panel A0 of FIG. 8C is a gray scale image* ***representing the raw activation factors stored in the warp table 20 (FIG. 1) for this particular effect.*** *... The changing gray values (i.e. scaled warp values) from one panel to the next are the result of adjusting the threshold values in the clip and gain unit ...*
>
> *The sequence shown in FIG. 9 illustrates a particle effect. For this particular sequence, the values in each of the x-offset and y-offset tables are constant throughout the image. A grayscale image of each of these tables (not shown)* ***would appear as*** *a field of a single shade of gray. Panel A0 in FIG. 9 is the raw warp table for this effect. panel B0 is the test image at the beginning of the sequence.*

It is therefore clear that Woodham does not teach providing a graphics image data file of a particle pattern defining a shape of a plurality of particles but rather teaches using x- and y-offset tables which have been represented by the gray scale images shown in FIGS. 8C, for the purpose of illustrating a video effect on paper in Woodham's patent. The offset values in these tables are visually represented by corresponding gray values

only for the purpose of explaining the video effect to the reader. This translation of the offset values into gray scale images is not done by Woodham's system and the gray scale images are not used by the rest of the system.

Woodham does not teach that the graphics image data file defines a shape of a plurality of particles. It teaches the x- and y-offset tables defining the shape of the particles. For illustration of the contents of the x- and y-offset tables, Woodham has chosen to illustrate them as graphics files but does not teach defining the shape of the particles in the graphics image data file. The graphics files of Panel A of Fig. 8C are never used by any component of the system shown in Fig. 1 whereas the x- and y-offset tables are clearly used by the system.

With the system of Woodham, if one wants to create a new explosion pattern, he must create a new mathematical warp table. The user cannot create the pattern at home, using a simple graphics creation tool such as Photoshop™. With the present invention, the graphics image data file can be created by a user at home using Photoshop™. The user draws the shape of the particles and saves them in a file (the graphics image data file). The explosion effect can then use this file to create the video effect on the video source file(s). The warp table of Woodham does not have this flexibility for the creation of the graphics image data file.

Therefore, Woodham clearly does not teach or suggest providing a graphics image data file of a particle pattern for a video particle explosion effect.

Claims 1 and 11 contain the limitation of "providing a graphics image data file of a particle pattern defining a shape of a plurality of particles". Therefore, all claims are new and non-obvious. However, for completeness sake, the following arguments are presented as to separate patentability of the dependent claims :

Claim 2 has the additional limitation that the graphics image data file has a plurality of

channels. Woodham's offset tables clearly are not a graphics image data file with a plurality of channels. Woodham does not mention channels of a graphics file at all. Channels of a graphics file has no purpose or meaning in Woodham. The channels of the graphics image data file of Applicants' invention allow to store information concerning a plurality of parameters for the explosion which do not need to be defined in tables and can also be stored within the graphics image data file along with the shape of the particles without confusing the effect designer since different parameters are stored in different channels of the graphics image data file. The passages identified by the Examiner as relevant to claims 2 and 3 (Fig. 1, Fig. 3, col. 1, line 56 to col. 2, line 17, col. 5, lines 22-34) do not discuss channels of a graphics image data file and are irrelevant. The limitation of claim 2 is clearly not taught or suggested by Woodham who only uses numerical tables to define all aspects of the effect. This claim does not stand or fall with any other at least for this reason.

Claim 3 has the additional limitation that the channels are a red channel, a green channel, a blue channel and an alpha channel. Woodham does not teach channels (see argument for Claim 2) and further does not define the channel "types" or "colors". The passages identified by the Examiner as relevant to claims 2 and 3 (Fig. 1, Fig. 3, col. 1, line 56 to col. 2, line 17, col. 5, lines 22-34) do not discuss channels of a graphics image data file and are irrelevant. The use of the available color channels of a graphics image to store at least the shape of the plurality of particles is novel. The limitation of claim 3 is clearly not taught or suggested by Woodham who only uses numerical tables to define all aspects of the effect. This claim does not stand or fall with any other at least for this reason.

Claim 4 has the additional limitation that the graphics image data file further defines at least one parameter of an explosion sequence for all of said plurality of particles, a spin parameter for each of said plurality of particles and a softness of edges of each said plurality of particles and wherein said shape, said explosion sequence, said spin

parameter and said softness are each defined in one of said plurality of channels. Woodham does not teach channels (see argument for Claim 2) and further does not define the parameters stored in each channel. The passages identified by the Examiner as relevant to claim 4 (Fig. 1, Fig. 3, col. 1, line 56 to col. 2, line 17, col. 5, lines 22-34) do not discuss channels of a graphics image data file and the particular parameters stored in each channel and are therefore irrelevant. The use of the channels of the graphics image to store the parameters related to explosion sequence, spin and softness of edges is novel. The limitation of claim 4 is clearly not taught or suggested by Woodham who only uses numerical tables to define all aspects of the effect. This claim does not stand or fall with any other at least for this reason.

Claims 5 has the additional limitation that the particle pattern is a shattered glass pattern. In Woodham, the particle pattern is created using numerical values inputted in a table and there is no teaching of providing a graphics image data file in which the particle pattern is a shattered glass pattern. Even though such patterns are known in the prior art, no one has provided them as graphics image data files. The use of the graphics image to provide a particle pattern such as a shattered glass pattern is novel. The limitation of claim 5 is clearly not taught or suggested by Woodham who only uses numerical tables to define all aspects of the effect. This claim does not stand or fall with any other at least for this reason.

Claim 6 has the additional step of drawing the graphics image data file. Woodham does not allow to draw the particle pattern. The particle pattern is created by inputting numerical values in a numerical table. Drawing the particle pattern is not discussed in Woodham since it is not appropriate to provide a pattern using a graphics image data file. Figures 7 to 9 of Woodham simply teach to translate numerical values stored in a table into a graphical representation used for illustration purposes in a patent application. It does not teach drawing the graphics image data file to be used to generate the sequence of object definition data sets. As mentioned at col. 4, lines 64-

68 of Woodham, the mapping of each pixel is defined in the 2-D offset tables and not in a graphics image data file. Drawing the graphics image data file is clearly novel. The limitation of claim 6 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 7 has the additional step of defining an edge for said plurality of particles and filling up each of said plurality of particles with a different color. Woodham does not teach to draw the graphics image data file. It further does not teach defining an edge for the particles and filling up the particles with different colors. The limitation of claim 7 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 8 has the additional step of drawing each channel of said graphics image data file and wherein each parameter is defined by drawing colors in each said channel. Woodham does not teach channels of a graphics image data file and drawing the graphics data file. Therefore, Woodham cannot teach drawing each channel of the graphics image and defining the parameters using colors in the channels. This is clearly novel and extremely useful to simplify the providing of the explosion effect parameters. The limitation of claim 8 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 9 has the additional limitation that the step of generating comprises identifying a plurality of triangles for each said particle and storing shape information from each triangle in said object definition data sets. Woodham does not extract triangles from each particles and store information about the shape from the triangles in object definition data sets. Woodham does not have to extract this information because each parameter affecting each pixel is defined in tables. This extraction step goes beyond what is needed in Woodham and allows a much simpler definition of the particle pattern

since the shape can simply be drawn in a graphics image data file by the effect designer and the shape information is then extracted by the engine of the present invention. The shape information must be provided in the offset tables in Woodham and is not extracted from a graphics image data file. This limitation is clearly novel and extremely useful to simplify the providing of the particle shape. The limitation of claim 9 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 10 has the additional limitation that the step of generating comprises identifying a plurality of triangles for each said particle and storing parameter information from each triangle in said object definition data sets, said parameter information being extracted from each said channel. Woodham does not extract triangles from each particles and store information about the parameters from the triangles in object definition data sets. Woodham does not have to extract this information because each parameter affecting each pixel is defined in tables. This extraction step goes beyond what is needed in Woodham and allows a much simpler definition of the particle pattern since all parameters concerning the explosion effect can simply be drawn in a graphics image data file by the effect designer and the parameter information is then extracted by the engine of the present invention. The parameter information must be provided in the offset tables in Woodham and is not extracted from a graphics image data file. This limitation is clearly novel and extremely useful to simplify the providing of the effect parameters. The limitation of claim 10 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 11 is for a method for rendering a video particle explosion effect on a video source data file and comprises the additional steps of providing a video source data file; and rendering said video particle explosion effect using said object definition data sets and said video source data file. Woodham renders the effect using offset tables and parameters, not using the object definition data sets obtained from the graphics image

data file. The step of rendering is therefore clearly novel and is not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 12 has the additional limitation that the rendering comprises loading each field of said video source data file into a graphics engine; loading a corresponding one of said sequence of object definition data sets into said graphics engine; and generating a particle exploded video output using said field and said corresponding object definition data sets. Woodham renders the effect using offset tables and parameters, not by loading the object definition data sets obtained from the graphics image data file for each field of the video source file. The limitation of claim 12 is therefore clearly novel and is not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

2. Whether Woodham, Jr. et al. (US Patent No. 6,069,668) teach a "sequence of object definition data sets generated using the graphics image data file" as defined in Applicant's claims.

In the Office Action of July 14, 2004, the Examiner asserted that the limitation of the "sequence of object definition data sets generated using the graphics image data file" is shown in the teachings of Woodham, Jr. et al. as follows : :

> "providing images .. with new sequence of addresses (<u>object definition data sets</u>) by transformation of images [by tables], then the generated output is mixed with the background video in accordance with a key signal"] (See col. 2 line 57-65; Also see rejection herein above)"

The Examiner has also argued that the step of generating a sequence of object definition data sets is taught by Woodham when it discusses "re-sampled images", "transformed images", "generated particles by adjusting offset/warp tables" and

"generated/transformed foreground video images". Reference is made by the Examiner to Fig. 1, Fig. 3, Fig. 9, Fig. 10, col. 2 line 52-col. 3 line 13, col. 1, line 30-42, col. 4 line 53-col. 5 line 34, col. 12 lines 17-24.

Since Woodham does not teach the "graphics image data file", it further does not teach using the graphics image data file in the generation of the sequence of object definition data sets.

Furthermore, as stated in col. 4, lines 58-66, Woodham loads "different offset tables" to specify "individual trajectories of the particles. Adjusting the gain of the clip-and-gain function varies the time-staggering of the particle motion; i.e. when each particle or group of particles begins its movement. The ability to individually specify the mapping of each pixel, made possible through the use of the 2-D offset tables, permits burst effects." Woodham therefore uses numerical tables to define the trajectory of the particles. These tables are clearly not obtained from the graphics image data file of Applicants' claim 1. In Applicant's invention, the object definition data sets are generated using the graphics image data file.

Woodham teaches that the trajectories of the particles must be specified by the clip-and-gain function for each pixel, as is expressed at col. 4 line 64- col. 5 line 15 :

> *The ability to individually specify the mapping of each pixel, made possible through the use of the 2-D offset tables, permits burst effects not available in existing warp-based DVE's.... However, simply by loading appropriate warp, offset, and key tables into the DVE of the present invention, such effects for real time live-action video effects are easily and inexpensively realized.*

Woodham does not teach generating the object definition data sets from the graphics image data file. Rather, the parameters are determined in the tables and the numerical

values are directly used by the system without involvement of a graphics image data file.

Woodham clearly fails to teach and suggest the sequence of object definition data sets of Applicants' claims.

Claims 1 and 11 contain the limitation of "generating a sequence of object definition data sets using the graphics image data file". Therefore, all claims are new and non-obvious. However, for completeness sake, the following arguments are presented as to separate patentability of the dependent claims :

Claim 2 has the additional limitation that the graphics image data file has a plurality of channels. Woodham's offset tables clearly are not a graphics image data file with a plurality of channels. Woodham does not mention channels of a graphics file at all. Channels of a graphics file has no purpose or meaning in Woodham. The channels of the graphics image data file of Applicants' invention allow to store information concerning a plurality of parameters for the explosion which do not need to be defined in tables and can also be stored within the graphics image data file along with the shape of the particles without confusing the effect designer since different parameters are stored in different channels of the graphics image data file. The passages identified by the Examiner as relevant to claims 2 and 3 (Fig. 1, Fig. 3, col. 1, line 56 to col. 2, line 17, col. 5, lines 22-34) do not discuss channels of a graphics image data file and are irrelevant. The limitation of claim 2 is clearly not taught or suggested by Woodham who only uses numerical tables to define all aspects of the effect. This claim does not stand or fall with any other at least for this reason.

Claim 3 has the additional limitation that the channels are a red channel, a green channel, a blue channel and an alpha channel. Woodham does not teach channels (see argument for Claim 2) and further does not define the channel "types" or "colors".

The passages identified by the Examiner as relevant to claims 2 and 3 (Fig. 1, Fig. 3, col. 1, line 56 to col. 2, line 17, col. 5, lines 22-34) do not discuss channels of a graphics image data file and are irrelevant. The use of the available color channels of a graphics image to store at least the shape of the plurality of particles is novel. The limitation of claim 3 is clearly not taught or suggested by Woodham who only uses numerical tables to define all aspects of the effect. This claim does not stand or fall with any other at least for this reason.

Claim 4 has the additional limitation that the graphics image data file further defines at least one parameter of an explosion sequence for all of said plurality of particles, a spin parameter for each of said plurality of particles and a softness of edges of each said plurality of particles and wherein said shape, said explosion sequence, said spin parameter and said softness <u>are each defined in one of said plurality of channels</u>. Woodham does not teach channels (see argument for Claim 2) and further does not define the parameters stored in each channel. The passages identified by the Examiner as relevant to claim 4 (Fig. 1, Fig. 3, col. 1, line 56 to col. 2, line 17, col. 5, lines 22-34) do not discuss channels of a graphics image data file and the particular parameters stored in each channel and are therefore irrelevant. The use of the channels of the graphics image to store the parameters related to explosion sequence, spin and softness of edges is novel. The limitation of claim 4 is clearly not taught or suggested by Woodham who only uses numerical tables to define all aspects of the effect. This claim does not stand or fall with any other at least for this reason.

Claims 5 has the additional limitation that the particle pattern is a shattered glass pattern. In Woodham, the particle pattern is created using numerical values inputted in a table and there is no teaching of providing a graphics image data file in which the particle pattern is a shattered glass pattern. Even though such patterns are known in the prior art, no one has provided them as graphics image data files. The use of the graphics image to provide a particle pattern such as a shattered glass pattern is novel.

The limitation of claim 5 is clearly not taught or suggested by Woodham who only uses numerical tables to define all aspects of the effect. This claim does not stand or fall with any other at least for this reason.

Claim 6 has the additional step of drawing the graphics image data file. Woodham does not allow to draw the particle pattern. The particle pattern is created by inputting numerical values in a numerical table. Drawing the particle pattern is not discussed in Woodham since it is not appropriate to provide a pattern using a graphics image data file. Figures 7 to 9 of Woodham simply teach to translate numerical values stored in a table into a graphical representation used for illustration purposes in a patent application. It does not teach drawing the graphics image data file to be used to generate the sequence of object definition data sets. As mentioned at col. 4, lines 64-68 of Woodham, the mapping of each pixel is defined in the 2-D offset tables and not in a graphics image data file. Drawing the graphics image data file is clearly novel. The limitation of claim 6 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 7 has the additional step of defining an edge for said plurality of particles and filling up each of said plurality of particles with a different color. Woodham does not teach to draw the graphics image data file. It further does not teach defining an edge for the particles and filling up the particles with different colors. The limitation of claim 7 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 8 has the additional step of drawing each channel of said graphics image data file and wherein each parameter is defined by drawing colors in each said channel. Woodham does not teach channels of a graphics image data file and drawing the graphics data file. Therefore, Woodham cannot teach drawing each channel of the

graphics image and defining the parameters using colors in the channels. This is clearly novel and extremely useful to simplify the providing of the explosion effect parameters. The limitation of claim 8 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 9 has the additional limitation that the step of generating comprises identifying a plurality of triangles for each said particle and storing shape information from each triangle in said object definition data sets. Woodham does not extract triangles from each particles and store information about the shape from the triangles in object definition data sets. Woodham does not have to extract this information because each parameter affecting each pixel is defined in tables. This extraction step goes beyond what is needed in Woodham and allows a much simpler definition of the particle pattern since the shape can simply be drawn in a graphics image data file by the effect designer and the shape information is then extracted by the engine of the present invention. The shape information must be provided in the offset tables in Woodham and is not extracted from a graphics image data file. This limitation is clearly novel and extremely useful to simplify the providing of the particle shape. The limitation of claim 9 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 10 has the additional limitation that the step of generating comprises identifying a plurality of triangles for each said particle and storing parameter information from each triangle in said object definition data sets, said parameter information being extracted from each said channel. Woodham does not extract triangles from each particles and store information about the parameters from the triangles in object definition data sets. Woodham does not have to extract this information because each parameter affecting each pixel is defined in tables. This extraction step goes beyond what is needed in Woodham and allows a much simpler definition of the particle pattern since all parameters concerning the explosion effect can simply be drawn in a graphics image

data file by the effect designer and the parameter information is then extracted by the engine of the present invention. The parameter information must be provided in the offset tables in Woodham and is not extracted from a graphics image data file. This limitation is clearly novel and extremely useful to simplify the providing of the effect parameters. The limitation of claim 10 is clearly not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 11 is for a method for rendering a video particle explosion effect on a video source data file and comprises the additional steps of providing a video source data file; and rendering said video particle explosion effect using said object definition data sets and said video source data file. Woodham renders the effect using offset tables and parameters, not using the object definition data sets obtained from the graphics image data file. The step of rendering is therefore clearly novel and is not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

Claim 12 has the additional limitation that the rendering comprises loading each field of said video source data file into a graphics engine; loading a corresponding one of said sequence of object definition data sets into said graphics engine; and generating a particle exploded video output using said field and said corresponding object definition data sets. Woodham renders the effect using offset tables and parameters, not by loading the object definition data sets obtained from the graphics image data file for each field of the video source file. The limitation of claim 12 is therefore clearly novel and is not taught or suggested by Woodham. This claim does not stand or fall with any other at least for this reason.

CONCLUSION

In view of the foregoing, it is submitted that the rejection of Claims 1-12 is improper and should not be sustained. Therefore, a reversal of the Final Rejection of the Examiner is respectfully requested.

Respectfully submitted,
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Signature

November 24, 2004
Date

IX. APPENDIX A

Claims under Appeal

1. A method for generating a sequence of object definition data sets for a video particle explosion effect comprising:

providing a graphics image data file of a particle pattern defining a shape of a plurality of particles;

generating a sequence of object definition data sets using said graphics image data file;

wherein said object definition data sets can be used to render a particle explosion effect on a video file.

2. A method as claimed in claim 1, wherein said graphics image data file has a plurality of channels.

3. A method as claimed in claim 2, wherein said graphics image data file has a red channel, a green channel, a blue channel and an alpha channel.

4. A method as claimed in claim 3, wherein said graphics image data file further defines

at least one parameter of an explosion sequence for all of said plurality of particles, a spin parameter for each of said plurality of particles and a softness of edges of each said plurality of particles and wherein said shape, said explosion sequence, said spin parameter and said softness are each defined in one of said plurality of channels.

5. A method as claimed in claim 1, wherein said particle pattern is a shattered glass pattern.

6. A method as claimed in claim 1, further comprising a step of drawing said graphics image data file.

7. A method as claimed in claim 6, wherein said step of drawing comprises defining an edge for said plurality of particles and filling up each of said plurality of particles with a different color.

8. A method as claimed in claim 4, further comprising a step of drawing each channel of said graphics image data file and wherein each parameter is defined by drawing colors in each said channel.

9. A method as claimed in claim 1, wherein said generating comprises identifying a

plurality of triangles for each said particle and storing shape information from each triangle in said object definition data sets.

10. A method as claimed in claim 2, wherein said generating comprises identifying a plurality of triangles for each said particle and storing parameter information from each triangle in said object definition data sets, said parameter information being extracted from each said channel.

11. A method for rendering a video particle explosion effect on a video source data file comprising:

providing a graphics image data file of a particle pattern defining a shape of a plurality of particles;

generating a sequence of object definition data sets using said graphics image data file;

providing a video source data file;

rendering said video particle explosion effect using said object definition data sets and said video source data file.

12. A method as claimed in claim 11, wherein said rendering comprises

loading each field of said video source data file into a graphics engine;

loading a corresponding one of said sequence of object definition data sets into said graphics engine;

generating a particle exploded video output using said field and said corresponding object definition data sets.

X. APPENDIX B

Examples of particle patterns